Page 1 of 7



# SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 Version 5.0 Revision Date 15.07.2012

## Section 1 - Identification of the material and supplier

1.1 Product identifier

Product name 2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane

Product Number CG-O186 CAS No. 3388-04-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Industrial.

Intermediate chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer: Qufu Chenguang Chemical Co.,Ltd

Address: Xizou county, Qufu, Shandong, 273100, China

Telephone: +86 537 5052266 Fax: +86 537 5052166 E-Mail: info@silanechem.com

1.4 Emergency telephone number

Emergency response service: +86 537 4631088

## **Section 2 - Hazards identification**

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Carcinogenicity (Category 1B)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

May cause cancer.

May cause heritable genetic damage.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram



Signal word : Danger

**Hazard statement(s)** 

H350 May cause cancer.

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Page 2 of 7



## Precautionary statement(s)

P201 Obtain special instructions before use.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

## According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

T Toxic

R-phrase(s)

R45 May cause cancer.

R46 May cause heritable genetic damage.

S-phrase(s)

S23 Do not breathe vapour.

Wear suitable protective clothing, gloves and eye/face \$36/37/39

protection.

S45 In case of accident or if you feel unwell, seek medical advice

immediately.

S53 Avoid exposure - obtain special instructions before use.

Restricted to professional users.

#### 2.3 Other hazards - none

# **Section 3 - Composition/information on ingredients**

## 3.1 Substances

Synonyms: 3-(2-Trimethoxysilylethyl)cyclohexene oxide

2-(7-Oxabicyclo[4.1.0]hept-3-yl)ethyl-trimethoxysilane

Formula  $C_{11}H_{22}O_4Si$  Molecular Weight 246.38 g/mol

Component Concentration

2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane

CAS-No. 3388-04-3 EC-No. 222-217-1

#### 3.2 Mixtures

Not Relevant

## Section 4 -First-aid measures

## 4.1 Description of first aid measures

### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

## If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a

## **Qufu Chenguang Chemical Co., Ltd**

Page 3 of 7



physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

## In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

# **Section 5 - Firefighting Measures**

# 5.1 Extinguishing media

## Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx), silicon oxides

## 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

## Section 6 - Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

## 6.4 Reference to other sections

For disposal see section 13.

## **Section 7 - Handling and Storage**

## 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of Electrostatic charge.

## 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Moisture sensitive.

Page 4 of 1



## 7.3 Specific end uses

no data available

# **Section 8 - Exposure Controls / Personal Protection**

## 8.1 Control parameters

## Components with workplace control parameters

## 8.2 Exposure controls

## **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## **Personal protective equipment**

## Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

## Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal Technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

## **Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be Selected according to the concentration and amount of the dangerous substance at the specific workplace.

## **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face Respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## Section 9 - Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

Appearance Colourless liquid
Odour no data available
Odour Threshold no data available
pH no data available
Melting point/freezing no data available
Initial boiling point and 310 °C - lit.

Flash point 146 °C - closed cup Evaporation rate no data available Flammability (solid, gas) no data available Upper/lower flammability or no data available

explosive limits

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Page 5 of 7



Vapour pressure no data available
Vapour density no data available
Relative density 1.065 g/cm³ at 25 °C
Water solubility no data available
Partition coefficient: noctanol/ no data available

water

Autoignition temperature no data available
Decomposition temperature no data available
Viscosity no data available
Explosive properties no data available
Oxidizing properties no data available

## 9.2 Other safety information

no data available

# **Section 10 - Stability and Reactivity**

## 10.1 Reactivity

no data available

## 10.2 Chemical stability

no data available

## 10.3 Possibility of hazardous reactions

no data available

#### 10.4 Conditions to avoid

Heat, flames and sparks.

## 10.5 Incompatible materials

Strong acids, Strong oxidizing agents, Water, Bases, Alcohols, Peroxides

## 10.6 Hazardous decomposition products

Other decomposition products - no data available

## **Section 11 - Toxicological Information**

## 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - 8.528 mg/kg

LD50 Dermal - rabbit - 6.716 mg/kg

## Skin corrosion/irritation

no data available

## Serious eye damage/eye irritation

no data available

## Respiratory or skin sensitization

no data available

## **Germ cell mutagenicity**

no data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is

## **Qufu Chenguang Chemical Co., Ltd**

Page 6 of 7



identified as probable, possible or confirmed human carcinogen by IARC.

## Reproductive toxicity

no data available

## Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

## Specific target orgtoxicity - repeated exposure

no data available

## **Aspiration hazard**

no data available

#### Potential health effects

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion** Harmful if swallowed.

**Skin** May be harmful if absorbed through skin. May causes skin

irritation.

**Eyes** May causes serious eye irritation.

## **Signs and Symptoms of Exposure**

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### **Additional Information**

RTECS: VV4000000

# **Section 12 - Ecological Information**

### 12.1 Toxicity

no data available

## 12.2 Persistence and degradability

no data available

## 12.3 Bioaccumulative potential

no data available

## 12.4 Mobility in soil

no data available

## 12.5 Results of PBT and vPvB assessment

no data available

#### 12.6 Other adverse effects

no data available

# **Section 13 - Disposal Considerations**

## 13.1 Waste treatment methods

#### **Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

## **Qufu Chenguang Chemical Co., Ltd**

Page 7 of 7



## **Contaminated packaging**

Dispose of as unused product.

# **Section 14 - Transport Information**

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

no data available

## **Section 15 - Regulatory Information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

## 15.2 Chemical Safety Assessment

no data available

## **Section 15 - Regulatory Information**

#### **Further information:**

The above information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations. Properties of the product are to be found in the respective product leaflet.

- End of Safety Data Sheet